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Docket No. 030-11313
License No. 45-09475-30

Virginia Polytechnic Institute
and State University
ATTN: Mr. Minnis Ridenour, Chief
Business Officer and Executive
Vice President
Blacksburg, VA 24061

Gentlemen:

SUBJECT: NOTICE OF VIOLATION
(NRC INSPECTION REPORT NO. 45-09475-30/90-02)

This refers to the inspection conducted by Mr. J. Pelchat of this office on November 13-14, 1990. The inspection included a review of activities authorized for your University. At the conclusion of the inspection the findings were discussed with Dr. A. Keith Furr, Ph.D., Chairman, Radiation Safety Committee, and Mr. Doug Smiley, Radiation Safety Officer.

The inspection was an examination of activities conducted under your license with respect to radiation safety and compliance with NRC regulations and the conditions of your license. It included selective examinations of procedures and representative records, interviews with personnel, and direct observations by the inspector.

Based on the results of this inspection, certain activities appeared to be in violation of NRC requirements, as specified in the enclosed Notice of Violation (Notice). We are concerned about the violations because they reflect the lack of in-depth radiation safety reviews prior to the amendment of radioactive material use authorizations. Although you had a requirement to perform safety reviews, you had no mechanism established to assure that the Radiation Safety Officer (RSO) or the Radiation Safety Committee (RSC) conducted safety reviews that evaluated changes in the quantities possessed or the uses of licensed materials. The lack of detailed critical review of such changes before they were authorized often prevented the RSO and the RSC from identifying increased potential radiation safety hazards and from prescribing additional protective measures to reduce the risks posed by such new activities. Your letter dated November 21, 1990, which transmitted your formal report of this incident to the NRC, stated that a detailed hazard analysis program to review proposed authorization changes would be developed and put into place by January 15, 1991. In addition to the information you provide in accordance with the enclosed Notice, please submit a detailed description of your hazard analysis process.

We are also concerned about the lack of timely response to the October 9, 1990 phosphorus 32 (P-32) contamination event and believe that the lack of available qualified personnel to provide assistance with routine and incident-related surveys, including bioassays, as well as other radiation safety activities was

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a contributing factor. Following this event, the first bioassay samples for the evaluation of possible P-32 ingestion were not collected until October 22, 1990, and the notification of all other authorized radioactive materials users of the contamination incident and the potential hazards of using homogenizing equipment to process experimental materials containing radioactive materials, especially in open containers, was not made until November 16, 1990. The lack of timeliness appears to have been further exacerbated by the assignment of nonradiation safety-related duties to the RSO.

The effective implementation of the detailed hazard analysis program mentioned above will result in additional professional staff time being required by the Radiation Safety Program. Your letter dated November 21, 1990, also discussed your ongoing efforts to provide additional personnel to the Radiation Safety Office staff. Please discuss in your response to the Notice, actions you have taken or will take to ensure that sufficient resources are provided for the program to fulfill its responsibilities in view of the additional workload which will be imposed upon the Radiation Safety staff by the enhanced radiation hazard analysis program.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to this Notice, including your proposed corrective actions and the results of future inspections, the NRC will determine whether further NRC enforcement action is necessary to ensure compliance with NRC regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96.511.

Should you have any questions concerning this letter, please contact us.

Sincerely,

ORIGINAL SIGNED

BY

W. E. CLINE

William E. Cline, Chief
Nuclear Materials Safety and
Safeguards Branch
Division of Radiation Safety
and Safeguards

Enclosure:
Notice of Violation

cc w/encl: (See page 3)

Virginia Polytechnic Institute
and State University

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FEB 05 1991

cc w/encl:
Douglas Smiley, Radiation Safety Officer
A. Keith Furr, Ph.D., Chairman,
Radiation Safety Committee
Commonwealth of Virginia

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